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ABSTRACT

Techniques for developing and using informal reading inventories are listed. Concepts and purposes of the inventory are suggested, and reading levels are defined. Suggestions are offered for individual and group inventories, material preparation and analysis, question formation and selection, methods of scoring and recording, and methods of evaluation. A bibliography is included. (This document previously announced as ED 023 562.) (JB)

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by

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and

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of

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INTRODUCTION

IN THIS pamphlet Professors Johnson and Kress have set forth in direct and readily understandable fashion the techniques for developing and using informal reading inventories. Their clear exposition of the underlying rationale of this important classroom and clinic device—as well as their detailed suggestions for the development of inventories, and the use of these inventories in assessing children's reading needs—makes this publication a valuable one. The chasm between theory and practice is bridged clearly and distinctly.

Perhaps the most important concept presented is the idea that teaching is essentially a diagnostic enterprise and that all teaching provides an opportunity for informal diagnosis and evaluation. The detailed suggestions for the informal reading inventory may be viewed as one way of applying this diagnostic philosophy to the teaching of reading.

Written as a practical tool for teachers and diagnosticians, the ideas presented will prove helpful to members of the profession at all levels. This pamphlet in the Association's Reading Aids Series is a valuable addition to our growing list of publications.

Theodore Clymer
President, 1964-1965
International Reading Association

The International Reading Association attempts, through its publications, to provide a forum for a wide spectrum of opinion on reading. This policy permits divergent viewpoints without assuming the endorsement of the Association.

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Chapter 1

WHY INFORMAL READING INVENTORIES?

"Should I move Jane into the third level reader?"

"I wonder why Rob is having so much trouble keeping up with his group?"

"Frank's permanent record card says he'd finished the first reader in June, but he can't seem to read the second reader now at all. What should I do with him?"

"I have eleven children who hit between 4.7 and 4.9 in reading comprehension on last year's achievement tests. Do you think they'd make a good reading group?"

Possibly these are not your exact questions, but they do have a familiar ring. Most teachers show a real concern for their pupils' achievement in reading. They also realize that good teaching is dependent upon understanding those to be taught. Planning for reading instruction is, therefore, impossible for them without thorough investigation of each pupil's present level of achievement, his capacity for achievement, and his specific strengths and weaknesses. The classroom teacher must evaluate each of his pupils in all of these areas. He can accomplish this task most efficiently through the use of informal inventories, which are actual structured observations of reading performance. The problems teachers face arise not out of lack of recognition of the need, but out of uncertainty about determining the correct instructional levels.

Various methods are frequently used to attempt to determine the proper level for a child's reading instruction. Prominent among them are standardized tests. For many reasons, such tests prove inadequate for this particular purpose. They are designed for group measurement and give information about the child in terms of group achievement. Standardized tests rate an individual's performance as compared to the performance of others. By contrast, an informal inventory appraises the individual's level of competence on a particular job without reference to what others do. It is designed to determine how well the individual can do the job. Materials of known levels of

difficulty are used to find out if he can or cannot read them adequately. Inventories can be administered on an individual or a group basis. For general classroom use, the group inventory is more efficient except for those pupils whose status cannot be appraised adequately without a complete, clinical-type inventory. The evaluation of the reading of children in this latter group may depend on an individual word recognition test and reading inventory.

The purpose of this bulletin is to suggest criteria for evaluating a pupil's achievement levels in reading and methods the classroom teacher may use to find these levels. Techniques applicable to both individuals and groups will be considered.

In both the group and individual inventories, the child reads material at known levels and responds to questions designed to measure his understanding of what he has read. Material at one level only is usually employed for each test when group procedures are used. In administering an individual inventory, the teacher has the pupil read materials at successively higher levels until he reaches the point at which he can no longer function adequately. In both cases, specific abilities can be evaluated at the same time that information is obtained on the appropriate difficulty level of materials for independent reading, for instruction in reading, and for listening activities. Getting all this information through group inventory techniques may require a number of reading sessions at various levels. However, with either procedure the teacher has an opportunity to determine levels and needs in the most logical way—by seeing how the pupil functions in an actual reading situation.

Chapter 2

NATURE OF AN INFORMAL READING INVENTORY

● Basic Concepts

THE TERM *informal reading inventory* is one in our language which expresses three fundamental concepts with three words. Consider first the basic noun in the title. This technique of evaluating a child's performance is an inventory in the sense that it is a detailed study of his whole performance in the reading area and those language and thinking functions related to reading. The second major concept is that of reading itself. In the label informal reading inventory, the function reading is widely conceived. The interest is not in mere pronunciation of words, but also in the manipulation of ideas which are represented by these words. Finally, the technique is an informal one in that specific methods are not standardized, and no norms have been established for performance to be compared with what other students can do. Instead, evaluations are made in terms of absolute standards. A child's performance is judged against virtual perfection rather than compared with what the majority of children might do if given the same job.

An informal reading inventory, therefore, offers the opportunity to evaluate a child's actual reading performance as he deals with materials varying in difficulty. While an appraisal of these specific reading abilities is being made, opportunities also arise for making informal evaluations of his expressive and receptive abilities in the oral language area, for reading is only one facet of verbal communication. As such, it is inextricably bound in with listening, speaking and writing—the other facets. An effective evaluation of a child's ability to read must take into consideration this interrelatedness of the receptive and expressive functions of total language performance.

● Specific Purposes

A number of very specific kinds of information can be obtained from careful administration of an informal reading inventory. Accom-

plishing these purposes is inherent in the administration of the informal reading inventory provided a competent examiner makes the evaluation. Because the usefulness of the inventory depends on accurate observation of the individual's performance in the testing situation, and interpretation based on these observations, only a competent examiner can accomplish the purposes.

Careful administration of an informal reading inventory can determine the level at which the child is ready to function independently, the point at which he can profit from instruction, the level where he reaches complete frustration with the material, and his level of hearing comprehension. Three of these four levels have special significance for the teacher. It is necessary to know the level of material the child can handle adequately when working on his own. Much of the child's school work, and certainly that reading which will make him a mature and avid reader, is done on an independent basis. Unless materials at the proper level are provided, the child can hardly be expected to do an adequate job in independent work and thereby establish for himself high standards of performance. All instructional work must be provided at a level where the child meets sufficient challenge to learn and yet has adequate readiness for learning. This means that he must achieve well enough to be able to absorb the instruction which is being given. However, to give instruction in materials which the child can handle virtually independently would be foolhardy. Finally, for oral activities it is important to know the child's hearing comprehension level. Too often the false assumption is made that if material is read to the child, he will be able to understand it regardless of the level of complexity it represents. For profitable listening activities one must know the hearing comprehension level.

A second purpose to be served by the informal reading inventory is the determination of the child's specific strengths and weaknesses. Only in terms of such analysis of specific skills and the pupil's adequacy of achievement in these skills can a suitable instructional program be planned. Teaching at the right level is not enough. It must be directed toward overcoming any specific weaknesses that exist. It must also be given in areas where the child has adequate readiness for learning.

For instance, a child may be weak in auditory discrimination of long vowel sounds and show no appreciation of vowel digraphs which represent such sounds. Readiness for the second area involves the first. It might well be possible to teach, at this time, to overcome the

lack of auditory perception. However, it would be foolish to launch a program of instruction on the vowel digraphs before readiness is established.

A third purpose of the inventory is to help the learner himself become aware of his levels of achievement and his specific strengths and weaknesses. As he works with materials of increasing difficulty, he should be able, with the aid of the teacher, to determine where he functions well and where he needs assistance. In the same fashion, he should develop an awareness of the kinds of thinking and word recognition which he is capable of handling, and those in which he needs to improve. Without adequate learner awareness, instruction becomes exceedingly difficult if not impossible.

A final purpose to be accomplished by an inventory is that of evaluation of progress. Repeated inventories at periodic intervals should make it possible to determine changes in levels and in the handling of individual skills and abilities. In this way a true measure of the child's growth can be obtained.

● Criteria for Levels

One of the problems in determining independent, instructional, and hearing comprehension levels is the variability which exists in the criteria used for judgment. All too often, the criteria are quite low. Consequently, the level at which a child's performance is judged adequate for independent work often turns out to be one at which he has many problems. Instead of doing a high quality job with the material, he is perhaps operating at something close to the old seventy-percent-passing level. In the same fashion, children are often considered ready for instruction when they have a great many deficiencies in their operating patterns at a particular level. Experience has shown that when there is too much to be accomplished through instruction, the child does not adequately profit from instruction and retain those things which are taught. In order to overcome these weaknesses, high standards must be used for judging the achievement levels. In the following paragraphs, each of the four levels previously noted is discussed in terms of the specific criteria to be applied.

Independent level: This is the level at which a child can function on his own and do a virtually perfect job in handling of the material. His reading should be free from observable symptoms of difficulty such as finger pointing, vocalization, lip movement, and other evidences of general tension in the reading situation. Oral reading

Independent Level

Criteria*

Word recognition: 99%

Comprehension: 90%

Related Behavioral Characteristics

Rhythmical, expressive oral reading
Accurate observation of punctuation
Acceptable reading posture
Silent reading more rapid than oral
Response to questions in language equivalent to author's
No evidence of:

lip movement	vocalization
finger pointing	sub-vocalization
head movement	anxiety about performance

*Must be met without aid from the examiner.

should be done in a rhythmical fashion and in a conversational tone. Materials, in order to be considered to be at an independent level, should be read with ninety-nine per cent accuracy in terms of word recognition. This does not mean merely final recognition of the words in the selection. Rather, this means that even in a situation of oral reading at sight, the child should be able to handle the material accurately, making not more than one error of even a minor nature in one hundred running words. In terms of comprehension, the score should be no lower than ninety per cent. Whether the reading has been done silently or orally at sight, the child should be able to respond with the same degree of accuracy to questions testing factual recall, ability to interpret and infer, and should have the comprehension ability required for full understanding of the material. He should be able to respond adequately to humor, for instance, or to follow any sequence of events involved in the material. In addition, the child should be able to make adequate applications of information and ideas to other situations.

Attention to the independent level can be a key point in the determination of progress in reading. The child, his teacher, his parents, and the librarian should all be concerned with this level. All are involved in the process of selection of materials for his independent reading. Books bought for his own reading, his personal library, should be ones he can read well. References suggested to him by the librarian, as she helps him get resources for carrying out a project, must be ones he can use successfully. Homework assignments should be ones he can read without assistance. It is through wide reading at the independent level that the child has opportunities to apply the abilities he has acquired, to learn through his own efforts, to increase the rate and flexibility of his reading—in short, to bring his reading ability to the point that it provides him with real satisfaction. Only through his independent reading will an individual become a "spontaneous reader," one to whom reading is a natural part of living.

Instructional Level: This is the level at which the child should be and can profitably be instructed. Here again the child should be free from externally observable symptoms of difficulty. Again, as at the independent level, he should be able to read rhythmically and in a conversational tone. One would expect that certain difficulties might arise in the course of oral reading at sight; however, when the child has a chance to read the material silently, most of these difficulties should be overcome. Consequently, oral rereading should be definitely improved over oral reading at sight. The child, in order to profit

Instructional Level

Criteria*

Word recognition: 95% Comprehension: 75%

Related Behavioral Characteristics

Rhythmical, expressive oral reading
Accurate observation of punctuation
Conversational tone
Acceptable reading posture
Silent reading more rapid than oral
Response to questions in language equivalent to author's
No evidence of:

lip movement	vocalization
finger pointing	sub-vocalization
head movement	anxiety about performance

*Must be met without aid from the examiner.

from instruction, should encounter no more difficulty than can reasonably be expected to be overcome through good instruction. In terms of specific criteria in word recognition, this means that he should perceive accurately at least ninety-five per cent of the words in the selection. In terms of comprehension, he should attain a seventy-five per cent level of understanding of the material without instructional aid. When these criteria are met, the child in all probability will be able to reach, with teacher help, the same high levels of performance as were indicated as criteria for the independent level. In general, one should strive in instruction to have the child handling the material independently by the time the lesson is completed. If he begins the lesson with less adequacy than ability to get ninety-five per cent word recognition and seventy-five per cent comprehension, there is very little likelihood that he will overcome all of his problems.

Certain other evidences of ability to profit from instruction can be observed at this level. The child should know, for instance, when he is running into difficulty. He should be able to profit from minimal clues offered by the teacher to help him overcome any difficulties he may encounter. He should also know when he needs to ask for direct help because he lacks the skills necessary to solve problems he meets in reading. Here, as at the independent level, the child should be able to set continuing purposes for reading once he has been helped to develop an initial readiness.

It is in guided work at the instructional level that the child will have the opportunity to build new reading and thinking abilities. Building on the foundation of his previously acquired skill, he can profit from teaching and thus extend his concepts, his word analysis skills, and his specific comprehension abilities. Extension of these skills through both increased range of abilities and greater depth of applicability is the purpose of instruction. If this is to be accomplished, knowledge of the child's instructional level is essential to the teacher.

Frustration Level: The point at which the child becomes completely unable to handle reading materials is of more clinical than classroom importance. For the classroom teacher, however, knowing this level may serve two purposes. Information on the frustration level may give the teacher some guidance about the kinds of material to avoid for this child's work. It may also give him some indication of the rate at which the child might be able to progress when he is taught at his proper instructional level. If a child is ready for instruc-

Frustration Level

Criteria

Word recognition: 90% or less Comprehension: 50% or less

Related Behavioral Characteristics

May show one or more of the following:

- abnormally loud or soft voice
- arhythmical or word-by-word oral reading
- lack of expression in oral reading
- inaccurate observation of punctuation
- finger pointing (at margin or every word)
- lip movement—head movement—sub-vocalization
- frequent requests for examiner help
- non-interest in the selection
- yawning or obvious fatigue
- refusal to continue

tion at one level and completely frustrated at the next, there is clear-cut evidence that he has many problems to be overcome at the appropriate instructional level. It is not likely that this instruction will progress rapidly because of the complexity of problems. On the other hand, if there is a considerable spread between the instructional and the frustration levels, a better chance for fairly rapid progress exists. There is evidence that a child can continue to use his reading abilities with fair effectiveness when he meets more difficult material than that truly appropriate for instruction. This fact would seem to indicate that the needs to be met at the instructional level and somewhat above are not terribly serious or complex ones. Consequently, he might be expected to solve any problems encountered relatively rapidly with good teaching to help him.

Specific criteria for the frustration level are these: comprehension of fifty per cent or less and word recognition of ninety per cent or less. Failure to meet the other criteria already described for independent or instructional level would also be indicative of frustration.

Hearing Comprehension Level: This is the highest level at which the child can satisfactorily understand materials when they are read to him. The hearing comprehension level can serve as an index to the child's current capacity for reading achievement. It indicates, in other words, the kinds of materials that he would be able to understand if his reading levels were at this moment brought to a maximum point. Criteria for judgment of adequacy of hearing comprehension are similar to those for the establishment of the instructional level. The child should be able to understand at least seventy-five per cent of the material when it is read to him. A second measure, and a very important one, is the index given by his own speaking vocabulary and language structure. He should, in responding to the material, show an oral language level which is comparable to the language level of the material which has been read to him. The necessity for the examiner to translate questions down in language level or for the child to answer in a lower level of language would indicate that he is not comprehending fully at this point.

All instructional activities involving listening should take into account each child's hearing comprehension level. Whether materials are being read to the class or spoken, there can be no real profit to an individual if they are beyond his hearing comprehension level. He may simply tune out when he finds himself failing to understand. Knowing the appropriate levels of oral language activities can lead, then, to better classroom attention and thus to greater learning.

Hearing Comprehension Level

Criteria*

Comprehension: 75%

Response to questions in language equivalent to author's

*Must be met without aid from the examiner.

The hearing comprehension level has one other kind of significance for the teacher. It gives him an indication of the level at which the child *should be reading*. The criteria in terms of comprehension are the same for the instructional reading level and the listening level. One should not feel completely satisfied until the child can do as well with the material when he reads it himself as when it is read to him. Therefore, a goal to aim for is equivalence of the reading instructional and the hearing comprehension levels.

● Materials

The types of materials to be used in an informal reading inventory are dictated by the purposes of the inventory itself. Because the establishment of levels is one of the expected outcomes of the administration, it is obviously necessary that the materials represent a variety of levels. In a clinical instrument, for instance, it is usual to have the difficulty level of the material progress from preprimer level to the highest point that one is likely to need. These materials may represent a variety of subject areas and types of writing. However, if one were interested primarily in the achievement levels of the child in the science area, then materials relevant to this content field should be used for the inventory. Because an evaluation of competency in handling specific skills and abilities is the desired outcome, the materials of the inventory must present the opportunity for evaluating this competence. Obviously, not every ability which is a part of reading comprehension could be tapped in the course of each inventory; however, an adequate sampling should certainly be made.

The length of materials must be controlled sufficiently to allow the inventory to be administered without undue fatigue on the part of the child. In general, selections of increasing length can be handled as the difficulty level of the material increases. As few as thirty words might be used at preprimer level and yet two hundred fifty to three hundred at ninth reader level. Specific materials and arrangement of them for the inventory depend, to some degree, on whether the evaluation is to be in an individual or group situation. For an individual inventory, most frequently used on a clinical basis, two selections, preferably connected, should be chosen for each level, from preprimer to the highest level to be tested. One of these is used for oral reading at sight and the other for silent reading. Oral rereading ability is evaluated by having the child reread aloud a portion of the material designed for silent reading. For a group inventory, one

level at a time might be handled in a directed reading situation slanted toward evaluation or, at most, possibly two or three levels of material incorporated into one directed reading activity. It is very unlikely that a full range of materials from preprimer level on would be used in one group inventory. Instead, the total inventory process might continue over a number of related sessions. In the group inventory, definite portions of the materials would possibly not be set aside for silent or oral reading. When the children are operating in a group situation, there appears to be no justification for asking them to do oral reading at sight. Rather, materials should first be read silently as in any good instructional situation. Portions to be used to evaluate oral rereading should be selected so that the rereading is a natural part of the evolving group activity.

Ideally, the materials chosen for the inventory should parallel as closely as possible those materials which will be used for instruction. However, they should not be materials which the child has actually encountered in his instructional program. The inadequacies of the material which has been used for instruction seem obvious. There would certainly be the real possibility that the child would respond in terms of what had gone on in the classroom rather than in terms of what he was reading at the moment.

Chapter 3

PROCEDURES FOR INDIVIDUAL INVENTORY

THE TOTAL process of an individual informal inventory of reading ability may be divided for convenience into four major sections. These might be labeled pupil and examiner readiness, the word recognition test, the reading inventory, and the listening inventory. All four must be included if a thorough and competent job is to be accomplished.

• Pupil-Teacher Readiness

Two major purposes are to be accomplished during this period. There is, of course, a need to enlist the cooperation of the person being examined if the inventory is to give valid and reliable results. Consequently, this period must be one during which rapport is established between pupil and teacher, and the examining technique to be used is explained. It is important that the pupil have at least some understanding of the method to be used to evaluate his accomplishments and needs in the reading area.

During this period, the examiner has an opportunity to appraise the child's oral language facility in many different ways. As they engage in informal conversation, he can pick up any actual defects in speech, appraise the degree of spontaneity in informal situations, determine the child's ability to respond to specific questions, and get some measure of the maturity level of the child's vocabulary, sentence structure, and pronunciation. Likewise, there will be some reflection of the child's ability to concentrate on oral language activities and to respond appropriately. While all of this is going on, a great deal can also be learned about the child's attitude toward himself and the reading process. All of this material is significant in the total evaluation of his strengths and weaknesses in the reading area.

With the new information gained and any previous data on the child, the examiner should be able to estimate the possible level at which to begin with the word recognition test. The materials which

the child is currently using for instruction, for instance, may give some clue. The child's own evaluation of the problems that he faces in reading may be indicative of the kinds of needs which will be uncovered, and may well dictate that testing should begin at a very low level.

One guiding theme in the course of this period should be the attempt to make the child as serious, and yet relaxed, as possible about the job which faces him. He should understand that he is going to face tasks of increasing difficulty, so that he may go as far as his abilities will allow at this particular time. He should become aware of the fact that, if it is at all possible, the examiner will begin with materials which are quite easy for him, so that he will be able to demonstrate skills and understandings he has in the reading area.

● Word Recognition Test

To appraise the child's immediate recognition vocabulary and use of word analysis skills, words are presented in isolation. Lists of words from preprimer at least through sixth grade level should be available for this testing. In a clinical word recognition test, these lists should be samplings of common vocabulary at the various levels. For classroom use, however, the sampling is more often from the specific instructional materials. Twenty to twenty-five words appear to constitute an adequate sampling at each of the reader levels.

For actual test material, these lists of words should be typed clearly, at least double-spaced, so that they can be flashed with a manual tachistoscopic technique for immediate recognition purposes. Clear, readable type should be provided so that there is no possibility of difficulty which results from the vagueness of the visual stimulus rather than from the child's inability to handle the particular word recognition task required. From each list of words two scores will be derived, one representing the child's immediate recognition of the words (flash presentation), and the second, his performance in working words out in an untimed situation. In each case, the percentage of words correct is the score. On the flash test, only those correct responses which are given immediately are counted in the basic score. If corrections are made spontaneously, without a re-exposure of the word, credit is given for independent correction, but the basic score does not change. Thus if a child, on a list of 20 words, pronounced 19 correctly and one wrong, his basic score would be 95%; if he made an immediate correction of the twentieth word without seeing

it again, a plus one would be added to the record of the scoring. The 95% + 1 would indicate, then, that he had corrected his one error without teacher aid.

The manual technique for flashing the words to the child is a relatively simple one, but requires practice so that it can be executed smoothly. Two cards (3 x 5 index cards are suggested) comprise the materials needed. Seated next to the child, the teacher places the word list directly in front of the child. To flash a word to the child, the two cards are held together immediately above the first word form in the list. The lower card is moved down to expose the word; the upper card is then moved down to close the opening between them. This complete series of motions is carried out quickly so that the child gets only a flash presentation of the word. However, it is important that the word be exposed completely and clearly. A tendency in inexperienced examiners is to follow the lower card with the upper one, thus never really giving a clear exposure of the word. If a child responds correctly on the flash presentation, the examiner goes on to repeat the performance with the next word. If, however, an incorrect response is given, the word is re-exposed by pushing up the upper card so that the word can again be seen. No clues are given but the child has the opportunity to re-examine the word and to apply whatever word analysis skills he has at his command.

Immediate responses are recorded in a flash response column. The responses for re-exposures of the word appear in the untimed column. The untimed score is the basic sight vocabulary plus all corrections made without examiner help. It is important that responses be recorded immediately, so that there is complete accuracy in the record of the performance. Delay in writing down the child's response for even a few seconds may lead to confusion and incorrect reporting on the part of the examiner.

The word recognition test is continued, moving from level to level until the point is reached at which the child is no longer able to function adequately at any given level. Unless the situation is extremely frustrating to the child, it is advisable to continue the test until the child is able to recognize only three or four of the words in the list at the level then being administered.

The following example shows two levels of one boy's word recognition test as his responses were recorded. A check indicates a correct response; zero, no response; d.k., a statement that he did not know the word; separated letters, a naming of the letters. Single letters or phonetic symbols represent attempts to reproduce the indicated

speech sound. Where an incorrect response was recorded and followed by a check, Robert made a spontaneous correction. A zero preceding a word or a check mark indicates an unusual delay before responding.

Word Recognition Test[1]

Name Robert Age 9 Date 1/8/64

	Pre-Primer Level			Primer Level	
Stimulus	Flash	Untimed	Stimulus	Flash	Untimed
1. little	✓		1. Good	oh-oh-dog	0 "What story was it in"
2. you	✓		2. Run	✓	
3. can	✓		3. are	can	oh- and
4. Play	✓		4. like	little	0
5. said	0	something	5. one	✓	
6. Want	0	0	6. Away	"never saw that word!"	0
7. come	✓		7. All	0	di
8. it	✓		8. duck	0	b-b-b/0
9. comes	came	0	9. yes	y-e-s ✓	
10. Come	✓		10. get	0	0
11. for	✓		11. She	her	✓
12. see	✓		12. make	0	m-m/0
13. play	✓		13. my	✓	
14. It	✓		14. No	oh-oh-✓	
15. I	✓		15. This	0	this
16. to	✓		16. an	at/at	0
17. in	m-✓		17. red	✓	
18. Big	✓		18. run	✓	
19. not	down	0	19. Do	✓	
20. big	✓		20. he	d. remember	0
	75%+1	80%	21. yellow	✓	
"Only four wrong! I did good. I'm reading."			22. Will	what	✓
			23. home	✓	
			24. went	0	0
			25. they	0	came ✓
					32%

[1] First two levels of the Individual Word Recognition Test, Form C, based on the Daniels' Reading Vocabulary Study, Philadelphia: The Reading Clinic, Temple University, 1963.

The seventy-five per cent score, plus one, at preprimer level, for example, indicates that Robert had fifteen words of the twenty correct initially, during the flash presentation, and made one spontaneous correction without seeing the word again. His eighty per cent untimed score represents credit only for sixteen words which were recognized at flash because Robert made no additional corrections during the untimed presentation. At primer level, however, he worked out three in the untimed exposure. Here, his untimed score represents forty per cent correct during the flash presentation plus an additional twelve points for those three corrected when he had unlimited time to consider the word.

● The Reading Inventory

A wise procedure for starting the reading inventory is to begin at least one level lower than that at which the child first encountered difficulty in the word recognition test. The one situation in which this might not be suitable would be that in which the child has definitely revealed in his conversation or in his past history severe difficulties with comprehension. In this case, it would be best to begin at the very lowest level in order to present as few comprehension problems as possible on the initial selection.

Once the starting level has been determined, the procedure at each level is the same. Before any reading is done, a definite readiness for the particular selection should be established. In the course of this readiness, a purpose for reading should be brought out. The examiner must be careful not to reveal so much in the way of vocabulary used in the selection or ideas contained that he gets no opportunity to measure the child's actual reading performance. Instead, some orientation should be given which will give the child a reason for reading, and a set in the right direction. As soon as this is accomplished, the selection designed for oral reading at sight is read aloud by the child in order for him to accomplish the established purpose. The examiner times the reading accurately (with a stopwatch) and keeps a careful record of the exact way in which the selection was read. Each hesitation or error is recorded, for example. If there is need for examiner help with pronunciation of words, this is given, but the amount is very carefully checked. As soon as the reading has been completed, the comprehension check is administered. The examiner must keep in mind that his purpose here is to evaluate the child's comprehension, and not to teach him. If a question is an-

swered incorrectly, this does not mean that the examiner should help the child arrive at the right answer. Instead, he should go on to the next question. Responses to the comprehension questions should be recorded verbatim wherever this is possible. If such recording is not done, the immediate reaction to the adequacy of the response is oftentimes in question.

When the check on the reading of the first selection is completed, readiness for reading the second selection should be established immediately. Again, a purpose must be set for the reading. This time, the child reads the second selection at the same level silently. While this reading is being done, the examiner should observe carefully, keeping track of the time required for the reading as well as any signs of difficulty or specific reactions to the material. The comprehension check on the silent reading should be administered in the same fashion as was that for the oral reading at sight. When this has been completed, a new purpose should be established for re-reading a portion of the selection orally. Here, the performance should be recorded exactly as was done during the oral reading at sight.

This same procedure is followed at each level until a frustration point has been reached. When this occurs, the reading inventory itself is discontinued.

The following example is one child's performance on oral reading at sight at primer level. The notations indicate that he hesitated twice during the reading, apparently to give some thought to the words. Two actual errors were made. He read *cows* for *cow* and repeated to correct the error. He read *so* for *too* and apparently never noticed his error. Generally, he showed good fluency with the rest of the selection.

On the comprehension check, he responded freely, and showed ability to handle various types of questions. He forgot one bit of necessary information for the inference about the boy's name—the father's name. However, he made it clear that if he had remembered this, he would have been able to make the inference. His other error seemed to be one of failing to realize that the boy showed no signs of expecting to help until he was told he could and then went to bring the cow to his father rather than milk her himself.

All in all, indications are that the performance certainly meets the criteria for an instructional level. This is not to say that he might not also meet these criteria at a higher level or demonstrate similar needs at a lower level.

Primer -
Oral at sight
56 words

AT THE BARN

Bob and his father came out of the house.
They went to the big red barn.
They were going to get some milk.
"You can help me," said Mr. Black.
"I will get the cow," called Bob as
he ran on into the barn.
"Don't go so fast," called Mr. Black.
"You will make her jump."

sec. 28)3360 120 WPM
28
56

Good Rhythm
Expressive

W.R. 96%

56)2.70 .035 3 errors
168
320
280
40

Comp. 80%

Quick, natural responses

✓How do you know Bob and his father had not been outside? They came out of the house
✓Where had Bob and his father been? ✓
✓Where were they going? to the barn
✓What did they want to get? milk
✓In what were they going to put the milk? (picture clue) a bucket
○ What was Bob's last name? I forgot - it told him father's name, but I forgot
✓Did Bob expect to milk the cow? Yes How do you know? He went right to the barn to milk the cow
✓How did Bob feel about being allowed to help? How do you know? Pleased, glad
✓What warning did Mr. Black give Bob? Not to go so fast
✓How do you know Mr. Black was afraid Bob might scare the cow? He spoke at him to slow up or Bob'd jump.

Questions would need to guide for Thanksgiving "What did he do?" certain?

Recapitulation

WR 96	Oral Comp. 80	ORR: Time
Oral WPM 120	Silent Comp.	Correct?
Silent WPM	Avg. Comp.	Rhythm

Next time used: Q-A ran right away & take to father told him & cried help

● The Listening Inventory

The process of determining the highest level at which the child can understand materials read to him is usually begun at the next level following the one at which frustration was reached. In this process, the examiner again develops a readiness for the handling of the selection, and sees that a purpose is established just as it was for the reading of the materials by the child himself. In this case, however, the actual reading is done by the examiner. When this has

been completed, listening comprehension is evaluated in a manner similar to that used for measuring the child's reading comprehension. This process is continued at successively higher levels until the child fails to maintain a level of 75 per cent accuracy in comprehension.

When difficulties with understanding are at the root of the reading problem, the child may be able to do no better in the hearing comprehension test than when he is doing the reading himself. In such cases, it may be necessary to use alternate selections at lower levels to establish a hearing comprehension level.

● Conclusion

The individual informal reading inventory is a clinical device. It is designed to reveal extensive information about a child's reading strengths and needs as well as to establish the levels at which he can function independently and with instruction. The results obtained from administration of such an inventory are as good as the examiner, no better. Specific criteria for the establishment of levels have been indicated. However, the powers of observation and the standards of judgment of the examiner are the final determinants of the adequacy of the information gained.

Chapter 4

PROCEDURES FOR GROUP INVENTORY

A GROUP reading inventory is less subject than the individual type to easy division into separate operations. However, it should include the same major phases as does the individual inventory—readiness, evaluation of word recognition ability, the reading inventory per se, and the listening inventory. In actuality, some of this work may be done on an individual basis even though the inventory is basically carried out in a group situation.

● Teacher Readiness

For evaluating in group situations, the first step is to make an estimate of the possible instructional level of each child. Many kinds of data can be obtained from cumulative records, former teachers, and observations of daily performance. From these sources comes the information on which the hypothesis about instructional levels is made. Perhaps in a sixth grade class, for instance, a teacher decides tentatively that he may have one group ready for instruction at fourth reader level, another at fifth, a third at sixth, and a fourth somewhere above sixth. In addition, he feels that four of his pupils are quite far below the others in achievement, but is uncertain about definite levels.

He might proceed by selecting a good piece of reading material at sixth reader level and preparing himself thoroughly for using it as an inventory. This preparation would include attention to such factors as vocabulary, word recognition problems, and thinking abilities, which would be given to a piece of material to be used for an instructional reading activity. Only when his preparation is complete, is he ready to begin the inventory for those whose instructional levels are approximately at sixth reader. A similar selection of appropriate materials would then have to be made at the other estimated levels. For these, too, the teacher would have to make thorough preparation. Under this plan, the inventory would proceed

as a series of evaluative directed reading activities in which the emphasis would be on observation of the children's ability to handle the materials rather than on teaching procedures.

A second possible plan involves selections of related materials at more than one of the desired levels for concurrent use in one evaluative directed reading activity. Thus, in the same sixth grade situation, the teacher might select appropriate fourth and sixth reader level materials. Both would deal with the same topic so that they could be used simultaneously by the pupils who tentatively seemed ready for instruction at these levels. Use of these levels might also give some good clues to the level of performance of the children who were estimated to be ready for fifth reader work.

The teacher's preparation for using these inventory materials would be somewhat more arduous than would preparation for using only one piece of material at a time. He must not only analyze each piece of material in terms of vocabulary, concepts, and required skills in word analysis and comprehension. He must also consider them as joint resources for a group evaluative reading activity—see how they fit together, complement each other, and thus offer opportunities for thorough investigation of the children's ability to handle materials at these levels.

For the teacher who has never taught groups with a range of instructional levels by using materials at different levels, the first plan would probably be a more efficient one than the second for a group inventory. Evaluation at one level at a time, in this case, might be more productive of reliable results. Regardless of the choice of plans, the actual inventory process with the group will be very similar.

● The Reading Inventory

When the group is assembled for the inventory, the over-all plan for the activity will vary little from that for any good instructional reading activity. The differences lie in matters of emphasis. The objective is not to teach, but rather to determine if this material would be suitable for teaching. The basic question to be answered for each pupil is this: "Can he profit from instruction in this material?" Each phase of the reading activity, therefore, must be slanted toward evaluation. Actual teaching would be done only to see how well various individuals can respond to instruction given at this level. Thus, any instruction given in the inventory situation is actually for

purposes of further evaluation.

Pupil preparation: During the readiness or preparatory period of the group inventory, the teacher may use a variety of techniques and materials. His objectives are the following: to evaluate the pupils' backgrounds of relevant experiences and their ability to use these experiences, to see how many relevant concepts they have at their disposal, to determine whether they have a grasp of the vocabulary used in this material to express essential concepts, to evaluate their ability to perform whatever thinking processes are involved in understanding the selection, and to determine the degree of interest they show. These same objectives guide the evaluative phase of an instructional activity. In both inventory and instructional activity these objectives will be achieved only if the teacher allows freedom for the pupils to reveal themselves—their interests, concepts, vocabulary, experiences, thinking abilities, and attention. As he guides the activity, he must not become the dispenser of information, the judge of ideas presented. He may stimulate group discussion through use of what he knows about the children's backgrounds, materials read previously, pictures accompanying the material to be read currently, concrete objects rich in stimulus value, or countless other things related to the chosen material. If he wants to find out what and how the pupils think, he must ask more than tell, tentatively accept ideas even though he may know they are wrong, record contributions for further work on them, perhaps use vocabulary from the material to see how they respond, or set up situations which demand the same thinking abilities and processes as understanding of the material will require.

In the inventory, no attempt would be made to fill all the gaps which are discovered. For some of the pupils taking the inventory, deficiencies in experience, vocabulary, concepts, or thinking abilities, for instance, might be so severe that instruction in this material would be impossible. For them the essential question has already been answered—sixth reader is too high for instructional use. Depending on the total classroom situation at the moment, they might be dropped from the reading inventory to go on with some other activity or continue in it even though no more evaluation of their performance at this level is necessary. If they continue, the teacher is obligated to see that it is not a frustrating experience for them and that their inability to function is not evident to all to a debilitating degree.

For those pupils who seem able to proceed with the material, the

preparatory phase would continue with some developmental work. Clarification or development of concepts, introduction of essential vocabulary, guidance in thinking processes, etc., might be undertaken. Students would be guided toward the establishment of purposes for reading. All of this would be done to further the evaluation —to see how well children can profit from this help and apply it during the rest of the reading activity. During this stage of the inventory, the teacher might well assume a somewhat more directive role in order to identify specific points which need development.

Silent reading: Once the preparation has been completed and purposes for reading established, the second phase of the activity begins. Pupils read the material silently to satisfy the purposes they set up. Now the teacher has an opportunity to observe their performance. Some may proceed with no difficulty—reading at an acceptable rate, reflecting their understanding in their expressions, stopping when they have achieved what they set out to do. Others may exhibit various symptoms of difficulty—frowning, lip movement, finger pointing, requesting frequent help, and many others. Some may take an inordinate amount of time as they struggle along. All the things the teacher sees and hears during this silent reading period will become part of the data on which he bases his final evaluation. If pupils want to ask questions, the teacher will be available. From the questions asked, and the comments made to him, he may discover a great deal about the strengths and weaknesses in pupil performance.

Discussion and re-reading: When the silent reading has been completed, group discussion will focus on the purposes established for reading. Here the teacher will have an opportunity to discover how well various individuals satisfied these purposes. Re-reading, both oral and silent, may occur spontaneously or be done on request. Appraisal can be made of oral reading performance, ability to determine relevancy of ideas, and the like. Questions other than those raised in the original purposes can be asked to allow for more nearly complete evaluation of each individual's understanding of the material and his handling of the word recognition problems.

Conclusions and follow-up: By the time the preparatory phase, silent reading, discussion, and re-reading have been completed, the teacher should have clear evidence of each child's ability or inability to profit from instruction at this level. He should have a great deal of additional information about those who can function adequately there with instructional aid. He may have noted that one had diffi-

culty getting meaning from a context clue expressed in an appositional phrase. Another may have needed help with handling the *ti* element in words like *partial*. A third may have had trouble with two vowels together when they were in two separate syllables. A fourth may have encountered trouble with a sequence based on order of importance. In other words, the teacher may have discovered a great deal about the specific needs of these pupils he is going to instruct at sixth reader level. At the same time, he undoubtedly learned much on the positive side as he observed the things they were able to do well and the readiness they had for additional learnings.

About those who handled everything independently, spontaneously, and virtually perfectly at sixth reader level, the teacher may know only that he must check them at a higher level. He has not seen their instructional needs because they are not evident at the independent level. About those for whom this material was much too difficult, he may know little more than that he must check them at a lower level. He could not appraise their skills and abilities because the children were in so much trouble that they were unable to apply even those skills which they did have. Evaluation of specific needs would have to wait for the inventory at a lower level where they could actually profit from instruction.

During succeeding periods, the same procedures would be followed with other groups and other materials. Those for whom sixth reader materials had been too difficult might become parts of groups being checked at fourth or fifth. Those for whom sixth had been too easy might be checked at seventh or eighth. Even after all the group inventories are completed, additional information might be needed on some pupils. It would be to these that individual inventories would be administered. This might well mean making special arrangements outside the classroom setting.

● The Word Recognition Inventory

In the classroom situation it may not be necessary to administer a formal word recognition test to each child. It is highly possible that the teacher might get sufficient information on most children's levels of functioning in this area through the reading inventory and normal classroom activities. In some cases, however, a more thorough analysis of specific strengths and weaknesses might be needed. In others, an estimate of the child's ability to handle the word recog-

nition burden of particular instructional materials might be helpful. In either case, an inventory of the child's range of immediate recognition vocabulary and ability to apply word analysis skills is then in order.

Most appropriate, in this situation, is a sampling of the vocabulary of the specific materials which are being considered for instructional use. Several cautions must be observed. First, the nature of the vocabulary must be clearly identified. Is *all* the vocabulary of the particular material being taken into account, or are only the "new" or "technical" words being tested? If a child is tested, for instance, for his ability to recognize words representative of the total vocabulary of a book, a far higher percentage of recognition could be expected than if he is tested on only the supposedly more difficult words. Second, a truly random sampling of the words must be done. Any personal selection of words, on the basis of whatever criteria, will bias the results obtained. Third, comparable methods of vocabulary selection and sampling must be used at all levels. Otherwise, there can be no orderly progress of related observations from one level to the next.

The word recognition inventory, even when it is done as a part of an overall group reading inventory, should be administered to one child at a time. There is no group technique for getting the necessary information about his level of achievement on the test and an evaluation of his strengths and weaknesses in word analysis. The specific procedures, then, could be the same as those for the word recognition inventory discussed under the procedures for individual administration.

● The Listening Inventory

Determination of a child's hearing comprehension can be accomplished through group procedures similar to those used for the reading inventory. In actuality, the group listening inventory is an evaluatively-oriented directed listening activity.

Teacher preparation: In this area, as in reading itself, information is available to the teacher which can serve as a base for the setting of a tentative level. Each child's reaction to class discussion, to conversation, or to materials read to the group in the course of normal class activity will provide clues to his probable level of functioning in listening situations. Materials at levels comparable to these estimated levels should be selected by the teacher for the listening inven-

tory. Analyses of these materials, in preparation for working with them in the group situation, must proceed in the same fashion as would the preparation for the reading inventory. The word recognition burden is the only matter no longer of concern. Thorough acquaintance with the material from the standpoint of such things as its conceptual burden and the thinking abilities it requires is absolutely essential.

Presentation to pupils: Readiness for effective listening is as necessary as readiness for reading. Consequently, adequate evaluation of the child's readiness to listen profitably to the chosen material must be the first step of the inventory. Purposes for listening must ultimately be established. When the pupil preparation has been completed, guided listening proceeds with the teacher doing the reading of the material. This would be followed by an evaluatively-oriented discussion of the selection planned to reveal the children's level of understanding of the author's ideas.

Conclusion and follow-up: On the basis of observations made during the readiness period, the actual listening, and the ensuing discussion, at least tentative decisions can be made about each child's hearing comprehension level. For some in the group, rather definite conclusions may have been drawn about the specific level at which they can be instructed in listening activities. For others, further inventories may be indicated, and the whole process would have to be repeated with appropriate materials at varying levels of difficulty.

Chapter 5

PREPARATION OF MATERIALS

GENERAL guides for the selection and preparation of materials for inventory purposes have already been given. However, the specific ways in which these materials might be treated can best be shown by example. The following selection is one which might have been chosen for inclusion in an inventory. It is the purpose of this section to illustrate the kind of analysis a teacher or clinician might make of it and tentative questions which could be used to check comprehension.

WHAT IS PENNSYLVANIA?

What does Pennsylvania mean to you? Does it mean a train moving along a gorge deep enough to be known as the Grand Canyon of Pennsylvania? Does it mean forests, red and yellow and green in the glory of autumn? Does it mean the majesty of steel mills or lime quarries set against a backdrop of Nature's wonders? Does it mean fertile farmlands rolling over low, rounded hills to a cloud-banked far horizon? Does it mean tall buildings, row houses, narrow streets and a rush of people? Does it mean mines, railroad tracks, and coal cars? Does it mean cows knee deep in sweet-smelling clover as they graze in pastures? Does it mean a home on the curving slope of a mountain, where deer come out of the forest at dusk to nibble your corn? Pennsylvania might mean just one of these things to one person or all of them to someone else.

Pennsylvania has over eleven million people, the third largest number living in any state in the United States. More than two million of these live in Philadelphia. To these two million people, tall buildings, a rush of traffic, and row houses would all be familiar sights. In the Piedmont Plateau, of which York and Lancaster counties are a part, there are no large cities like Philadelphia. This area is the main agricultural section of Pennsylvania. To the people who live there, farmlands lying in fertile valleys, rolling plains, and low hills with irregular ridges would be very familiar. Philadelphians and York County farmers might have, therefore, very different pictures of what Pennsylvania is like.

How we think of Pennsylvania depends largely on the nature of the communities in which we have lived. It can depend, also, on how widely we have travelled in Pennsylvania and how carefully we have observed the things we passed on our way. To each of us, Pennsylvania is what we have known and what we have loved in Pennsylvania.

● Analysis of Materials

The first job to be accomplished with this material is that of analyzing it thoroughly. The teacher or clinician must read the selection from a number of different standpoints. In order to establish an over-all set for the approach to evaluation, the material should be read originally from the point of view of the potential examinee rather than that of an adult reading specialist. The primary purpose of this first reading would be to get some idea how the child might react to the material and what he might get from it. From such a reading should come a list of anticipated outcomes such as the following:

Some over-all ideas children could be expected to get from the reading:

1. Pennsylvania has a wide variety of topographical features.
2. Pennsylvanians are employed in many different occupations.
3. The natural features of an area play a large part in determining the kind of life lived in it.
4. We get our ideas from our experiences.
5. Things which have touched us most deeply become the basis of our lasting impressions.
6. Others.

A second reading of the selection must now be done from the point of view of the adult who is concerned with evaluating the child's performance. During this reading, notes should be made on the words or phrases which might cause difficulty, abilities which will be called upon in the course of the reading, and any other elements which will need to be a part of the evaluation. From this second reading could come lists such as the following:

Some specific abilities needed to handle the material:

1. Appreciate description, visualize scenes (Examples: knee deep in clover, rush of people)
2. Get main idea
   a. by inference (Example: variety in Pennsylvania)
   b. from topic sentence (Example: last sentence)

3. Appreciate relationship among ideas
   a. comparison (Example: gorge—canyon)
   b. contrast (Examples: spring — fall scenes, city — country scenes)
   c. equivalent through series arrangement (Examples: buildings, houses, streets, people)
   d. relative importance of ideas (Examples: have travelled—have observed)
4. Understand word meanings
   a. multiple meanings (Example: nature—Nature)
   b. figurative uses of words (Example: backdrop, pictures)
   c. shifts in part of speech (Example: far)
   d. unusual uses (Example: how and what not used in questions
5. Infer meanings from contextual clues
   description in separate sentence (Example: Plateau)
6. Interpret figurative language (Example: farmlands rolling over)
7. Extract information from questions (Examples: forest, limestone, coal)
8. Get and retain factual information (Example: no large cities)
9. Draw inferences from text combined with experience (Example: evergreen trees)
10. Appreciate the experience basis of meanings (Example: whole selection)
11. Appreciate significance of comma in
   a. series of adjectives (Examples: low, rounded)
   b. series of modified nouns (Examples: tall buildings, row houses)
   c. parenthetical expressions (Examples: therefore, also)
12. React to "signal" words (Examples: therefore, also)
13. Appreciate clause as the subject of a sentence (Example: How we think of Pennsylvania)
14. Understand the referent of a pronoun
   a. Specific thing or person (Example: it—Pennsylvania)
   b. An idea (Example: it—how we think of)
15. Follow varied sentence arrangements (Example: clause and phrase beginnings)
16. Appreciate title (Examples: significance of question)
17. Use table of contents and index (Examples: location of title, specific information)
18. Understand that stating some possibilities does not rule out others (Examples: last sentence, first paragraph—could also mean some or more)
19. Understanding definite and indefinite terms (Example: two million)
20. Handle shifts of style from paragraph to paragraph (Example: first to second)
21. Understand the import of style (Example: repetitious questions)

Specific vocabulary which might need attention:

gorge	horizon	communities	graze	*Compounds*
canyon	quilt	irregular	pastures	cloud-banked
majesty	ridges	Piedmont	nibble	patchwork
quarries	picture	Plateau	dusk	backdrop
fertile	nature–Nature	Philadelphian		farmlands

● Formulation of Tentative Questions

Deciding what is worthy of evaluation would be useless if appropriate ways were not planned to get the necessary information. Following the analysis, therefore, must be the process of working out possible questions to ask during the inventory. These should cover grasp of the vocabulary, acquisition of factual information (that definitely stated by the author), and drawing and supporting of inferences. In addition, the questions should tap the results of the use of other specific abilities of particular importance in the selection. Questions should be grouped, at this stage, according to their intent. Several possible ways of getting the same information might well be included. The final selection of questions to be used could be made later. The working lists might be similar to the following:

Potential factual questions:

1. What familiar city sights were mentioned in the story?
2. From what seasons were scenes described?
3. What is the population of Philadelphia?
4. What is Pennsylvania's main agricultural area?
5. Name two counties which are located on the Piedmont Plateau.
6. Others.

Potential inferential questions:

1. What are some of Pennsylvania's natural resources?
2. What would make you think that evergreen trees are native to Pennsylvania?
3. How may states have larger populations than does Pennsylvania?
4. How do you know that York and Lancaster Counties have rich land?
5. How could you tell, at night, that you were passing a field of clover?
6. What things about our home states would we be most likely to remember?
7. From this selection, how could you tell that it is possible to get to the bottom of the Grand Canyon of Pennsylvania?
8. Others.

Potential vocabulary questions:

1. What is a ridge?
2. What is the difference between a hill and a mountain?
3. How are a gorge and a canyon alike?
4. What is the name of the line where sky and earth appear to meet?
5. What does picture mean as it was used in this selection?
6. How would you "nibble a cracker"?
7. Others.

Potential specific ability questions:

1. What does the author conclude about what Pennsylvania is? (Topic sentence for whole article)
2. What difference in meaning of the phrase *two million* is there in "More than two million" and "To these two million"? (Definite and indefinite use of the same phrase)
3. How does the author describe a plateau? (Use of context clue to meaning separated by two sentences from the word)
4. Others.

● Selection of Questions

In an individual inventory, a sampling of questions would be made before the administration of the inventory. The specific questions would then comprise the comprehension check on the material. A good rule of thumb to follow is to include, in each block of five questions, two factual, two inferential, and one vocabulary question. The actual number of questions would vary directly with the length of the selection and its density of ideas. Where a special ability question is needed, it should be included.

For group inventory purposes, less formality and finality in selection of questions would be required. The specific way to get desired information about a particular child would have to be determined by the direction of the on-going group activity. In this situation, the tentative questions all become resources for the guidance of discussion and evaluation of each child's performance. The same general rule about balance in attention to vocabulary, factual detail, inferential thinking and specific abilities would be observed, however. Achieving such a balance during a group inventory is dependent on the teacher's being alert and able to keep his observations organized.

Chapter 6

INSTRUCTIONS FOR SCORING AND RECORDING

THE EFFECTIVENESS of the evaluation made by informal inventory techniques depends on the adequacy of the observations which are made. Considered judgments based on these observations are required. It is essential, therefore, that the examiner have an accurate record of the examinee's total performance. Only with complete information available can he really analyze the child's performance, comparing what happened in one situation with what happened in another, and arrive at reliable conclusions. For this kind of evaluation, no examiner can depend on his memory. Too many things happen too quickly for him to recall them. Therefore, complete recording must be achieved and accurate scoring and interpretation done on the basis of this record.

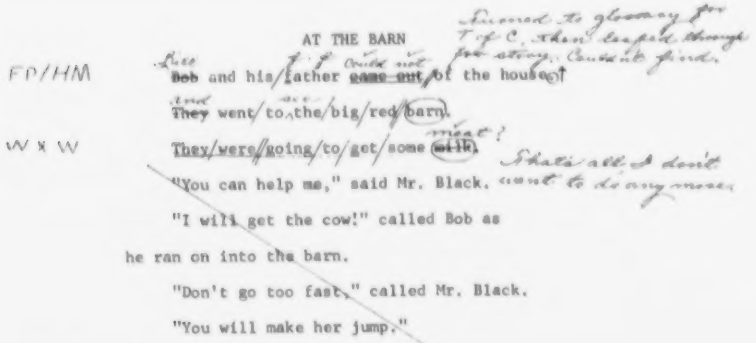
• Recording

Teachers using informal reading inventories will find it helpful to develop a "shorthand" for use in recording all significant elements of the behavior noted during the administration. Unlike the word recognition test, where ample time for recording can be taken whenever needed (see pages 16-19), in the inventory proper the child's reading of a selection is never interrupted for recording purposes. At the independent and instructional levels, where symptoms of difficulty are at a minimum, the examiner usually experiences few problems in recording behavior. However, as the selections become more difficult for the examinee, these symptoms multiply and it becomes an increasingly complex task for the examiner to keep pace with the reader and still note all of the errors made.

The following suggested recording style, once mastered, will speed up this process and make possible a consistently accurate "re-creation" of the test situation at a later date.

Oral reading at sight		Silent reading	
Key	Behavior noted	Key	Behavior noted
HM-	head movement	LM-	lip movement
FP-	finger pointing	HM-	head movement
↑↓-	rising or falling inflection		
was-	repetition	FP-	finger pointing
~~was~~	substitution	SV-	sub-vocalization
~~was~~	self correction	V-	vocalization
~~was~~	omission	(was)	examiner help given
the/man-	pause (One/per second)		
w x w-	word by word		
the man-	insertion		
(was)	examiner help given		

In addition to the above, all other pertinent behavioral symptoms and comments should be noted. The following example will serve to indicate one clinician's method of recording the oral reading.


AT THE BARN
FP/HM
Bob and his father came out of the house.
They went to the big red barn.
W x W
They were going to get some milk.
"You can help me," said Mr. Black.
"I will get the cow!" called Bob as
he ran on into the barn.
"Don't go too fast," called Mr. Black.
"You will make her jump."

In this case the examiner, after establishing a purpose for reading, asked the child to locate the story "about a farm" in the book—the resultant method employed is noted. The actual reading began with a substitution of *Bill* for *Bob*, a slight pause and then an initial consonant attack on *father,* followed by correct pronunciation of the

word. Next came two substitutions which were corrected by repetition after a two-second pause. No pause occurred at the end of the first sentence. Both finger pointing and head movement were evidenced during the reading. In the second sentence, in addition to inappropriate pauses and a substitution, *see* was inserted and, after an extended pause, the word *barn* was given by the examiner. By the third line the child's rhythm had deteriorated to a word-by-word performance. He further substituted *meat* for *milk*, but in a questioning tone, and the examiner told him the word. The entire line was then repeated with the final word correctly recognized in this reading. This was followed by his refusal to continue, as indicated in the margin of the illustration. The entire performance, from the initial substitution to the final repetition, consumed forty-seven seconds.

The recording system recommended has been illustrated in terms of a portion of an individual inventory. It seems apparent that certain modifications are necessary for good recording during a group inventory.

First of all, there would be no oral reading at sight of specified portions of the material. Instead, oral rereading would occur after the original silent reading. Therefore, higher levels of accuracy in word recognition and greater evidence of rhythmical, expressive reading would be expected. The shorthand record of the reading performance, however, would be similar to that described. It can be made on a copy of the selection and identified with the child's name. Another possibility would be to block off a section of a record sheet for each child and note significant elements of his performance in that block. With this system, one might make the following record in the block assigned to the child:

Bill/Bob, f-f-/father, could not/came out ⊙ ↑

The notes would indicate that he had said *Bill* for *Bob*, made an initial consonant attack on *father* and finally got it, substituted *could not* for *came out* and corrected it, and ignored the period. Of course, any child who reread this poorly would obviously be frustrated with material at this level. Further evaluation of his performance there would not be necessary.

Second, no neat, previously determined set of questions could be available for easy checking off of responses. Methods of recording would parallel those suggested for the word recognition area. The

teacher might simply use his list of tentative questions as a group record sheet, identifying the child as well as noting his response. If the idea of blocking off the record sheet into spaces for individual children is used, code numbers (F_5, I_2, V_4, S.A. 10) might be used to identify the question and the response recorded with it.

Third, other observations made during the readiness period, silent reading, oral reading, and discussion must be noted for each child. Again, the particular method used for this should be decided in terms of the convenience to the teacher. In all probability, notes grouped with each child's name will be most efficient for recording these facets of the performance.

• Scoring

The objective criteria suggested for identifying the various levels of a child's reading performance are based upon measurement of word recognition and comprehension abilities. The former is computed in the individual inventory, for the oral reading at sight, while the latter is found for both selections used at each level of material. Although nearly all the behavioral symptoms suggested as indications of difficulty with a selection are positively related to word perception skills, only four of these are usually counted in computing the word recognition score—substitutions, insertions, omissions, and requests for examiner aid. The clinician should count the number of such errors and compute a per cent score by dividing this number by the total number of words in the selection as shown in the sample. When the resultant quotient is subtracted from 100, a per cent correct score for the selection is obtained. This should be recorded in the recapitulation table at the bottom of the page for each oral reading selection employed in the administration.

Similarly, the comprehension score for *each* selection at every level of materials used may be computed by dividing the number of questions answered correctly by the total number of questions asked. This assumes that each question rates the same numerical value in the inventory being employed. When questions are included which require multiple responses, partial credit is usually given and included on a fractional basis in this total. These scores should be recorded in the spaces provided in the recapitulation box and averaged for a total comprehension score at each level of material.

The computation of words-per-minute scores for both oral and silent reading is facilitated when advanced provision has been made

for this in the preparation of an inventory. In the sample shown, an appropriate dividend for division by the elapsed time in seconds taken for the reading has been included. This dividend represents the product of the number of running words in the selection and sixty (seconds). Thus, the quotient obtained when the division has been completed is a words-per-minute score. The score in both the oral and silent selections should also be recorded in the recapitulation table.

In the group inventory, exact percentage scores of this type—based on the total words in the selection or total number of questions asked—cannot be computed. Complete evidence is not available for each child. Consequently, the percentage criteria must become guidelines for the teacher to follow in judging the child's total performance. Taking into account both overt and covert reactions, he must make an estimate of the child's degree of accuracy. "Of the questions asked or the statements made, to how many did I see or hear him react? Of these, what percentage brought appropriate reactions, reflecting his success with the material?"

● Evaluating Oral Rereading

The oral rereading mission in an informal reading inventory serves three specific purposes. It provides (1) a gauge of the child's ability to skim for the relocation of specific information, (2) another measure of his ability to read for a specific purpose and stop when that purpose has been satisfied, and (3) an index of his ability to profit from his previous visual contact with the material and thus improve—essentially in accuracy and rhythm—his oral reading performance here over his oral reading at sight. Improvement in rhythm is to be expected, if it originally was not good, in all selections ranging between a child's independent and his frustration levels. When this is not the case, such non-improvement is often interpreted as a sign of the need for the use of multi-sensory materials for word learning. The level recapitulation box provides a place for recording the ORR performance appropriate to these three purposes.

● Recapitulating the Results

The Recapitulation Record shown here is suggested as a means of summarizing the objective data obtained in the administration of an informal reading inventory. In Part I, the per cent scores

in word recognition from both the *Individual Word Recognition Test* and the oral reading at sight (context) are recorded for each level tested. Similarly, comprehension scores for reading and listening activities are summarized. Successful or nonsuccessful completion of the oral rereading task and some indication of the improvement or non-improvement of rhythm should be noted at each level given by checking and marking I for improvement or NI for non-improvement. (See Recapitulation Record for example.) Finally, the words-per-minute scores for both oral and silent reading should be recorded.

Informal Reading Inventory

Recapitulation Record

Name_____ Date_____ Grade_____

Case No._____ C.A._____ Examiner_____

I. Test Data

Level	Word Recognition: Isolation: Flash	Word Recognition: Isolation: Untimed	Word Recognition: Context	Comprehension: Hearing	Comprehension: Oral	Comprehension: Silent	Comprehension: Average	ORR	WPM: oral / silent
pp	100%	100%	99%		100%	90%	95%	✓	123 / 157
p	95+1	100	99		95	85	90	✓	128 / 149
1	75	95	96		80	75	78	✓I	114 / 138
2	60+1	80	93		65	70	68	✓I	90 / 110
3	20	50	89		60	45	58	✓NI	67 / 72
4				90%					
5				75%					
6				62½%					
7									
8									
9									

II. Estimated Levels

Independent P

Instructional 1

Frustration 3

Hear. Comp. 5

III. Recommendations

Modified experience appr.
Utilize his interest in animals
Parents read content materials to him for a while
Discontinue formal spelling
Have nurse check vision & refer if necessary

IV. Summary of Specific Needs

Retarded four years in reading behavior.
Phonics needs:
bl, str, long vowels, final e, vowel digraphs, diphthongs
Syllabication:
Compound words, prefixes, Suffixes
Variant endings
Uses context clues well, esp. pictures (over dep.)
Broaden interest & experience from animals to other areas.
No knowledge of T of C

From examination of the summarized data and inspection of the recorded performance at each of the levels tested, the examiner will be able to assign a reader level for each of the "Estimated Levels" in Part II. The criteria suggested for each of these levels must be kept constantly in mind when one is drawing conclusions on the basis of the data obtained.

Parts III and IV provide space for a summary of specific needs in such areas as word recognition, comprehension, and conceptual development, and for brief statements of teaching techniques to be tried or materials to be used. Any observations made which indicate the need for further testing or referral to specialists in related disciplines should also be reflected in appropriate recommendations here.

Chapter 7

CONCLUSION

NO READY-MADE inventories, individual or group, have been included in this pamphlet. Some of the items listed in the bibliography do contain or refer to such inventories. However, only limited benefits can accrue from taking and using any already prepared inventory. Such an individual inventory, for instance, can be used once with any one child and can result in a determination of his achievement levels and his specific needs in reading. However, it might make little impact on the examiner's facility in diagnosis generally or the teacher's general approach to his students. The likelihood of finding an already prepared group inventory to meet a particular teacher's needs at a specified moment is very small.

Far greater impact on both diagnostic and instructional work is apt to be felt when *construction* of inventories, not merely *administration* of them, is experienced. Whenever possible, of course, building, administering, and interpreting an inventory should be done under the supervision of someone well versed in techniques for informal evaluation. In this way, one's individual limitations could be more readily overcome. However, even when such expert guidance is not available, much can be learned through successive experiences with one's own inventory materials. Careful selection and preparation of materials, followed by try-outs of the inventory with children and resultant modifications, should be real learning experiences. Two major outcomes should result, to the benefit of all concerned.

First, as one's ability to construct, administer, and interpret inventories increases, better evaluations should be made of each pupil's achievement and needs. This improved evaluation would obviously reflect the increased skill of the examiner or teacher. Perhaps even more important, it would increase the degree of appropriateness of the particular inventory. When one is not dependent on a ready-made inventory, there is freedom to go in any needed direction. When determining a child's instructional level in social studies

materials, a social studies oriented inventory can be constructed and used. When the content area of concern is mathematics, an inventory based on mathematical situations and problems is possible. There is no need to infer the child's achievement in one area from what he does in another.

Second, the spirit and practice of diagnostic teaching should begin to pervade all classroom activities. A teacher who has constructed and used reading inventories can hardly ignore the minute-by-minute, day-by-day opportunities for informal evaluations of his pupils' performances. Thus, each lesson becomes a part of a continuing diagnosis of existing strengths and weaknesses. When this occurs, truly appropriate instruction can be planned and provided with ever decreasing need for individual testing.

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